CALFED
BAY-DELTA
PROGRAM

Environmental Water Program
Briefing Paper No. 2

Coordination with Other Programs and Initiatives

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List of Acronyms and Abbreviations

AFRP	Anadromous Fish Restoration Program
CAMP	Comprehensive Assessment and Monitoring Program
CVP	Central Valley Project
CVPIA	Central Valley Project Improvement Act
CWSCP	Critical Water Shortage Contingency Plan
CWSRMP	Critical Water Shortage Reduction Marketing Program
DFG	California Department of Fish and Game
DWR	California Department of Water Resources
EIS/EIR	Environmental Impact Statement/Environmental Impact Report
EPA	Environmental Protection Agency
ERP	Ecosystem Restoration Program
ERPP	Ecosystem Restoration Program Plan
ESAs	Endangered Species Acts
EWA	Environmental Water Account
EWP	Environmental Water Program
Interior	Department of the Interior
ISI	Integrated Storage Investigation
IWAT	Interagency Watershed Advisory Team
MOU	memorandum of understanding
NMFS	National Marine Fisheries Service
Panel	Governor's Advisory Drought Planning Panel
PEIR	programmatic environmental impact report
PSP	Proposal Solicitation Package
ROD	Record of Decision
SWP	State Water Project
SWRCB	State Water Resources Control Board
TAF	thousand acre-feet
USBR	U.S. Department of the Interior Bureau of Reclamation
USBR and DWR	Project Agencies
USFWS	U.S. Fish and Wildlife Service
WAP	Water Acquisition Program
WMS	Water Management Strategy
WOMT	Water Operations Management Team
WTP	Water Transfer Program
WUE	Water Use Efficiency

EXECUTIVE SUMMARY

This paper describes the Environmental Water Program (EWP), examines other programs with which the EWP should be coordinated, and explains the relationship between these associated programs and the EWP.

Aside from the EWP, programs examined include:

Environmental Water Acquisition Programs
  - CALFED Environmental Water Account (EWA)
  - Central Valley Project Improvement Act (CVPIA) Water Acquisition Program (WAP)

Other Programs
  - CALFED Water Transfer Program
  - CALFED Watershed Program
  - CALFED Environmental Justice Work Group
  - CALFED Ecosystem Restoration Program
  - CALFED Science Program and Independent Science Board
  - CALFED Water Use Efficiency Program
  - CALFED Integrated Storage Investigation
  - CALFED Operations Group and Water Operations Management Team
  - Critical Water Shortage Contingency Plan
  - State and Federal Short-Term Dry-Year Programs
  - The Sacramento Valley Agreement Integrated Water Management Program associated with the Phase 8 Settlement Agreement

For programs where the information is applicable and available, this paper includes information on:

program purpose,

general program description,

funding sources and availability,

program restrictions and/or limitations,

timeframe for implementation, and

opportunities for coordination with the EWP.

INTRODUCTION

The CALFED Environmental Water Program (EWP) will be acquiring water in support of flow-related goals contained in the CALFED Ecosystem Restoration Program Plan (ERPP). However, this program does not exist in isolation. There are numerous programs and activities that could influence how the EWP is implemented. This paper provides context for the EWP by describing these other programs and explaining the relationship between these associated programs and the EWP. The first section of this document describes the EWP and those programs most closely related: programs that acquire water for environmental purposes. The second section describes other related programs or programs with which the EWP should coordinate. These programs are listed below.

The potential benefits of coordination with other water acquisition programs include but are not limited to:

- reduced administrative costs (including those associated with environmental compliance) by eliminating duplicative efforts;
- a more cohesive, coordinated, and effective effort to acquire instream flows for environmental purposes;
- an ability to achieve program goals more quickly by pooling staff and funding resources; and
- a reduction in competition between the programs and potential reduction of water costs.

This paper should be considered a work in progress; it will be updated periodically, as more information becomes available or as programs change.

Environmental Water Acquisition Programs

The EWP will acquire water primarily for environmental uses. There are currently two other active government-operated environmental water acquisition programs in California: the CALFED Environmental Water Account (EWA) and the Central Valley Project Improvement Act (CVPIA) Water Acquisition Program (WAP). Several of the goals of the EWA and WAP overlap with the fundamental goal of the EWP: to purchase water from willing sellers to benefit the environment. Accordingly, coordination with these programs during development of the EWP framework is essential. Staff members of each of these three programs have been working to develop plans for coordinating the programs.

Currently, several nonprofit, nongovernmental organizations are interested in starting, are developing, or are operating environmental water acquisition programs. In California, interested

or active organizations include the Trust for Public Land, The Nature Conservancy, Environmental Defense, and the Water Heritage Trust. Because not much information is yet available about these programs, they are not yet included in this briefing paper. They will be added as more information becomes available.

Other Programs

Because the EWP is a CALFED program, its development and implementation will be coordinated with a number of CALFED actions and programs as appropriate. This paper describes 8 CALFED programs or activities with which the EWP will coordinate its development and implementation, including:

- CALFED Water Transfer Program,
- CALFED Watershed Program,
- CALFED Environmental Justice Work Group,
- CALFED Ecosystem Restoration Program,
- CALFED Science Program and Independent Science Board,
- CALFED Water Use Efficiency Program,
- CALFED Integrated Storage Investigation, and
- CALFED Operations Group and Water Operations Management Team.

This paper also addresses other non–CALFED programs with which the EWP should be coordinated, including:

- Critical Water Shortage Contingency Plan,
- State and Federal Short-Term Dry-Year Programs, and
- The Sacramento Valley Agreement Integrated Water Management Program associated with the Phase 8 Settlement Agreement.

This paper is not intended to provide very descriptive detail on each program; rather, it is intended to serve as a guide during development of the EWP framework. Because most of these programs are in the initial stages of development, it is anticipated that individual program details will evolve and become more refined in the coming months. For programs where the information is applicable and available, this paper includes information on:

- program purpose;
- general program description;
- funding sources and availability;
- program restrictions and/or limitations;
- timeframe for implementation; and
- opportunities for coordination with the EWP.

ENVIRONMENTAL WATER ACQUISITION PROGRAM DESCRIPTIONS

CALFED Environmental Water Program

Purpose

As noted above, the CALFED agencies created the EWP as a means to carry out the flow-related goals of the ERPP (CALFED Bay-Delta Program 2000a). Through the EWP, the CALFED agencies will:

- Acquire water from sources throughout the Bay-Delta watershed to provide flows and habitat conditions for fishery protection and recovery (CALFED Record of Decision [ROD], Page 19);
- Restore critical instream and channel-forming flows in Bay-Delta tributaries (CALFED ROD, Page 19);
- Improve Delta outflow during critical periods (CALFED ROD, Page 19); and
- Improve salmon spawning and juvenile survival in upstream tributaries as defined by the ERP and ERP Strategic Plan, by purchasing up to 100,000 acre-feet of water per year by the end of Stage 1; some of these ERP flows may contribute to the EWA [Environmental Water Account]. (CALFED ROD, Page 36)

The EWP team will also consider potential benefits to agricultural, rural, and urban water users and the fulfillment of other CALFED Program objectives as it develops and implements the EWP. This expanded vision broadens the focus of the EWP to include coordinated environmental water acquisitions and environmental water management.

Program Description

Program details (e.g., the definition of how water will be acquired and managed) will be defined and refined as the CALFED agencies and stakeholders build the program's framework. Once completed, the framework will also provide comprehensive descriptions of EWP goals and objectives, ways to meet those goals and objectives, ways to monitor the success of program activity, and a means to adaptively manage the program throughout the next several years. Development of the framework will be undertaken concurrently with the development and implementation of a pilot water acquisition program. This pilot program is intended to test implementation methods, contribute to development of the framework, supplement scientific knowledge, and help build the trust of potential sellers of water.

It is anticipated that the EWP will focus on Central Valley rivers and streams. However, coordination with the CALFED Science Program and other water acquisition programs will help define the geographic focus and stream priorities of the EWP.

Funding Availability and Source

The CALFED agencies have not identified a sustained source of funding to support the EWP as the total funding needed to sustain the program has not yet been determined. The EWP may be funded by a mix of public funds (bonds and appropriations) and user fees. Initially, the program will likely operate using annual allocations of public funds. At present, approximately $9 million of federal funds are available to acquire water for the EWP. Ultimately, funding may be obtained from water users or from partnerships with other CALFED and non–CALFED programs. The EWP may also have a cash reserve available for spot-market purchases and other options.

Program Restrictions or Limitations

Because the EWP is not specifically addressed in the CALFED Final Environmental Impact Statement/Environmental Impact Report (EIS/EIR) Record of Decision (ROD), there are no specific restrictions or limitations on sources or use of water. Coordination with other water acquisition programs may result in some limits on where EWP water comes from and how it can be used. As noted above, it is anticipated that the EWP will focus on fish, wildlife, and other ecological and CALFED objectives while striving to achieve benefits to agricultural, rural, and urban water users when feasible.

Timeframe for Implementation

The CALFED ROD calls for acquisition of 100 thousand acre-feet (TAF) of water for environmental purposes during Stage 1 of the CALFED Program implementation (2001–2007). Implementation of the EWP will be complex, so full execution is expected to take many years. It is expected that the EWP will be in existence throughout the 30-year life span of the CALFED

Program. Given this, the EWP team has developed a strategy that provides for implementation in several phases. In the current initial phase, development of the EWP includes forming plans to coordinate with other water acquisition programs and initial execution of pilot water acquisitions. Development and implementation of the pilot water acquisition program is expected to take a total of 12–18 months.

During the next phase, the EWP team will use results of pilot water acquisitions to evaluate program effectiveness and to refine the EWP framework. At that time, additional pilot acquisitions will likely be undertaken; each round of pilot acquisitions will provide new information that will make the next round more successful. Once it gathers sufficient information, the CALFED agencies will prepare an environmental document that covers full execution of the EWP. Because the EWP will be implemented using adaptive management, very specific details of the program and each acquisition may not be known at the time of environmental documentation. Accordingly, such documentation will be at a programmatic level, although it may also include project-specific components. As it is fully implemented, the EWP will be continuously monitored and improved to ensure that program goals and objectives are met. Environmental documentation and solidification of program details is expected to take 18–24 months.

The CALFED agencies will initiate additional acquisitions as the EWP progresses through and beyond the programmatic environmental documentation. Unless the programmatic environmental document addresses these additional acquisitions in detail, each will require project-specific environmental documentation. The EWP team will move the program to full implementation following completion of the programmatic environmental document.

CALFED Environmental Water Account

Purpose

The purpose of the EWA is to protect endangered and threatened fish species of the Bay–Delta estuary through environmentally beneficial changes in operations of the State Water Project (SWP) and Central Valley Project (CVP), while ensuring the ability of the SWP and CVP to maintain water deliveries for agricultural and urban uses.

An essential goal of the EWA is to provide increased water supply reliability to SWP and CVP contractors while ensuring the availability of sufficient water to meet fishery protection and the restoration/recovery needs outlined as part of the overall CALFED Ecosystem Restoration Program (ERP). In return, the U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), and California Department of Fish and Game (DFG) will provide commitments pursuant to the federal and State Endangered Species Acts (ESAs) for the first four years of Stage 1 implementation. These commitments will be based on the availability of water from existing regulation, the acquisition of the specified EWA assets, implementation of the CALFED ERP at specified spending levels, and the ability to obtain additional assets should they be necessary.

Program Description

Provisions for creation and implementation of the EWA are contained in the CALFED final EIS/EIR and subsequent ROD. The EWA is a component of CALFED's larger Water Management Strategy (WMS). The EWA is based on the belief that flexible management of water will achieve fishery and ecosystem benefits more efficiently than a completely prescriptive regulatory approach. Through the EWA, the CALFED agencies control a package of assets that includes money, water, and rights to storage and conveyance. The EWA allows decision-makers to react quickly to real-time needs of fish occurrence and vulnerability instead of relying completely on fixed operational requirements based on "typical" fish behavior patterns. The EWA benefits water users by providing additional water for fish without the need to reduce project deliveries. EWA managers are authorized to acquire, bank, transfer, and borrow water and arrange for its conveyance.

To protect fish, the EWA acquires alternative sources of project water supply called EWA assets. EWA assets are used to augment instream flows and Delta outflows, modify exports to benefit fisheries, and replace the regular project water supply reduced by the changes in project operations. The EWA supplements, and does not substitute for, existing prescriptive standards.

The EWA is cooperatively managed by the EWA team, consisting of Management Agencies (USFWS, NMFS, and DFG) and Project Agencies (U.S. Department of the Interior Bureau of Reclamation [USBR] and the California Department of Water Resources [DWR]). The Management Agencies manage EWA assets (e.g., water, storage, money, and operation rights) and exercise their judgment to determine when changes to project operations would be most beneficial to fish, including those listed under the federal and California ESAs. The Project Agencies are responsible for acquiring, banking, borrowing, and conveying EWA assets and implementing the operational changes recommended by the Management Agencies. The Management Agencies coordinate the EWA with the Project Agencies and stakeholders through the activities of the CALFED Operations Group.

The four general operational principles listed below guide EWA management activities (CALFED Bay-Delta Program 2000b):

- Management and Project Agencies shall cooperate to implement the EWA.
- The EWA shall cause no reduction in project deliveries.
- The EWA shall impose no net increased incremental costs upon the projects.
- The EWA shall be responsible for mitigating its water quality, water rights, and environmental impacts, as required by law.

To provide regulatory stability during the first 4 years of EWA implementation, the CALFED agencies have committed that measures taken to protect fish will not result in reduced project deliveries from the Delta. This commitment will be met using three tiers of assets:

- **Tier 1.** This is the baseline environmental protection provided by existing regulatory mechanisms and plans for operational flexibility, including the biological opinions for winter-run chinook salmon and delta smelt, the 1995 Delta Water Quality Control Plan, and the 800 TAF of CVP yield provided by the CVPIA.

- **Tier 2.** This tier (referred to as the EWA), in combination with the benefits of the ERP, includes the program's initial acquisitions, amounting to an annual average of 380 TAF (Table 1).

- **Tier 3.** Should it be required, Tier 3 may include additional purchases from willing sellers or consensual borrowing of water. The combination of Tier 1 and Tier 2 accounts represents an environmental water budget that would be used to avoid the need for Tier 3 water. The views of an independent science panel will be sought when considering the need to acquire Tier 3 water.

Table 1. Environmental Water Account Initial Assets

Action Description	Water Available Annually (Average, acre-feet)
SWP Pumping of (b)(2)/ERP Upstream Releases	40,000
EWA Use of Joint Point Agreement	75,000
Export/Inflow Ratio Flexibility	30,000
500 Cubic-Feet-per-Second SWP Pumping Increase	50,000
Purchases—South of Delta	150,000
Purchases—North of Delta	35,000
Total	380,000

In addition to the annual acquisitions specified in the CALFED ROD (see Table 1 above), an initial deposit of 200 TAF of south-of-Delta storage from a variety of unspecified sources was also specified. Source-shifting agreements with south-of-Delta water providers for 100 TAF will also be used to enhance the effectiveness of the EWA. Furthermore, the EWA may gain additional assets in the future if new facilities are constructed or operational changes are made.

The EWA can use the following four tools to acquire and use alternative sources of project water supply:

- **Water Acquisitions.** Using EWA funds, the CALFED agencies acquire EWA assets from willing sellers upstream of the Bay-Delta and from project export service areas. Purchases may include leases, options, long-term agreements, storage space, or any other types of transactions that make alternative project water supplies available. Water may be made available through direct purchase of water and management of Delta operations, including the sharing of CVPIA Section 3406 (b)(2) and ERP water

pumped by the SWP; the joint point of diversion agreement between the SWP and CVP for wheeling EWA water; SWP appropriation of unregulated flow; and project pumping made possible by the relaxation of regulatory requirements.

- **Banking of EWA Assets.** Acquired water may be stored in reservoirs upstream of the Bay-Delta or in San Luis Reservoir or in groundwater basins north and south of the Delta. The banking of EWA assets may also be used to facilitate "source-shifting" agreements.

- **Borrowing.** Water in San Luis Reservoir may be borrowed to enhance the effectiveness and use of EWA assets.

- **Transfers and Delta Conveyance.** Water assets acquired upstream of the Bay-Delta may be transferred to create EWA assets in the export service areas.

Upon issuance of the CALFED ROD in 2000, the CALFED agencies immediately began implementation of the EWA. First year (2001) fish protection included acquisition of 426 TAF of water (105 TAF upstream of the Delta, 221 TAF south of the Delta, and 100 TAF of source shifting), reservation of 25 TAF of variable assets, and 10 actions expending 290 TAF of water.

The EWA is being implemented in California's Central Valley, including the Bay-Delta region, and in project export service areas in Southern California, the northern part of the San Francisco Bay Area, central Contra Costa County, and central coastal areas.

Funding Availability and Sources

The Project Agencies (USBR and DWR) are to fund the initial acquisition of assets. Although all first-year acquisitions were purchased using State funds, the CALFED agencies expect contributions from the federal government during this first 4 years of EWA implementation; the EWA will expend an estimated $50 million annually on the water transfer market during this period. After the initial acquisitions, it is anticipated that acquisitions will be made through a public process that may take advantage of other agencies or third parties to acquire assets.

Program Restrictions or Limitations

Before Tier 3 water is applied, the views of an independent science panel will be considered in the evaluation of the presumed need for Tier 3 water. Otherwise, restrictions on the sources or use of EWA water are not explicitly stated.

If a determination is made that jeopardy to a listed species is likely even though the three tiers in the EWA were used, an exception to the ESA commitments may be made. If such a determination were made, the commitment not to affect existing project deliveries would no longer be valid and project operators could be required to reduce deliveries.

Timeframe for Implementation

The ESA commitments will be in effect for 4 years from the time of issuance of the ROD; this is based on ERP implementation and the availability of all the described assets for that time period. According to the EWA Operating Principles Agreement, the EWA will expire on September 30, 2004. However, it is anticipated that sufficient assets, either from existing sources or from supply augmentation, will be available for the protection of fish beyond the first four years and that the commitment will be extended to the remaining three years of Stage 1. However, this extension will require a review of the programmatic biological opinion that contains the original regulatory commitment. EWA assets and operations during the previous four years of activity (2001–2004) will be reviewed and evaluated.

The CALFED agencies hope to complete an EIS/EIR on the next several years of EWA program operation in 2002.

Coordination with the Environmental Water Program

The EWA and EWP are currently developing a plan to coordinate the efforts of these two programs and to achieve benefits for both programs with single acquisitions. These single acquisitions may include joint acquisitions, with funds contributed both by the EWA and EWP, and sequential acquisitions where assets are acquired by one program then sold to the other when the assets have served their intended initial purpose. Another possibility is that the EWP could contribute funds to influence the timing of EWA acquisitions so that water is transferred during ecologically beneficial times.

Central Valley Project Improvement Act Water Acquisition Program

Purpose

The U.S. Department of the Interior (Interior) established the WAP under the authority of Section 3406(b)(3) of the CVPIA. The purposes of the WAP are to meet those objectives of the Anadromous Fish Restoration Program (AFRP) that have not been met through reoperation of the CVP (under Section 3406[b][1] of the CVPIA) and through dedication of 800 TAF of CVP yield for fish and wildlife (under Section 3406[b][2] of the CVPIA). Specifically, the water acquired under the WAP is intended to help meet two important CVPIA goals:

- to augment instream flows in Central Valley rivers and streams to benefit anadromous fish, and

- to provide water supplies for State and federal wildlife refuges and the Grasslands Resource Conservation District (under Section 3406[d] of the CVPIA).

Program Description

Under the CVPIA, the Secretary of the Interior, in cooperation with the State of California, is authorized to acquire water to meet the objective of the CVPIA using a variety of means. This effort is being cooperatively undertaken by USBR and USFWS. Since the CVPIA was authorized in 1992, USBR has been acquiring water from willing sellers annually to meet the water needs of anadromous fish and for State and federal wildlife refuges, while it continues long-range planning for full WAP implementation. Under full implementation, the USBR intends to acquire water on a long-term basis to ensure water supplies and to reduce the costs associated with water acquisitions. The CVPIA WAP encompasses the entire CVP service area, which includes the Central Valley, north coast and San Francisco Bay Area counties, San Benito and San Luis Obispo Counties, and south coast counties.

Although water acquired thus far through the WAP has been owned and managed by USBR, USBR and USFWS have jointly determined where and how acquired water is used. At present, the WAP is coordinating its acquisitions with responsible State agencies.

USFWS and USBR have developed a Comprehensive Assessment and Monitoring Program (CAMP) for tracking WAP water acquisitions and biological benefits. The program is presently in its implementation phase and is likely to be developed concurrently with the WAP long-range plan.

The following briefly describes the two subprograms that fall under the umbrella of the WAP: instream AFRP acquisitions and refuge water supply acquisitions.

Acquisitions for Instream Flows. The USFWS developed the Final Restoration Plan for the AFRP (Restoration Plan) (January 2001), which focuses on long-term, sustainable restoration of the natural production of anadromous fish in Central Valley rivers and streams and includes instream flow priorities for various Central Valley rivers and streams.

Planning for long-term water acquisitions in support of the Restoration Plan is currently in its initial stages. Studies are currently being conducted to determine the priorities for water acquisitions based on three factors: biological needs, the hydrologic characteristics (including operations) of streams, and economic considerations. These three factors will determine priorities for the location and timing of acquisitions and for the amount of water acquired.

USFWS is presently defining the biological needs and hydrologic characteristics of several regulated and unregulated Central Valley rivers and streams. They are developing a series of interactive spreadsheet models for selected tributaries that compare the AFRP flow priorities for each stream with relevant hydrologic and operational information to determine how many of these priorities are being met through existing hydrology and operations. These spreadsheet models will provide a systematic approach for determining water acquisition needs (U.S. Fish and Wildlife Service and U.S. Bureau of Reclamation 2000). The models currently provide the following information for each river or stream system:

- AFRP flow priorities,

- expected monthly flows for all water-year types under existing conditions,
- estimates of which AFRP priorities are met with expected monthly flows,
- remaining unmet AFRP flow priorities for which water may be acquired, and
- effects of meeting flow needs on operation and storage.

USFWS is also developing a water acquisition priority model that includes economic considerations. When it is ready, the model will allow for water purchase decisions based on several variables:

- AFRP flow priorities within each stream,
- relative priorities between streams,
- hydrologic characteristics of each stream,
- cost of acquisition on each stream,
- annual spending strategy, and
- competition for water.

When the water acquisition priority model is completed, USFWS will use it to examine scenarios for different stream rankings, water acquisition strategies, and water markets. USBR will then use the results of these modeling efforts to pursue water acquisitions in support of the AFRP and CVPIA Section 3406(b)(3).

Acquisitions for Refuges. Section 3406(d) of the CVPIA requires Interior to provide water to Central Valley State and federal wildlife refuges to achieve optimum wetland management. These wildlife refuges are identified in Table 2. The amount of water to be supplied to these refuges is the amount defined as "Level 4" in the "Dependable Water Supply Needs" table in the 1989 Refuge Water Supply Report. Some water supply needs are also defined in the San Joaquin Basin Action Plan/Kesterson Mitigation Action Plan report.

Table 2. State and Federal Wildlife Refuges and Management Areas

Sacramento Valley Refuges	San Joaquin Valley Refuges
Sacramento National Wildlife Refuge	San Luis National Wildlife Refuge
Delevan National Wildlife Refuge	Kesterson National Wildlife Refuge
Colusa National Wildlife Refuge	Volta Wildlife Management Area
Sutter National Wildlife Refuge	Los Banos Wildlife Management Area
Gray Lodge Wildlife Management Area	San Joaquin Basin Action Lands
	Freitas
	West Gallo
	Salt Slough
	China Island
	East Gallo
	Grasslands Resource Conservation District
	Mendota National Wildlife Refuge
	Merced National Wildlife Refuge
	Kern National Wildlife Refuge
	Pixley National Wildlife Refuge

Funding Availability and Sources

As outlined in the CVPIA, funds for water acquisitions come from the CVPIA restoration fund. The money in this fund comes from a fee charged to CVP water contractors under provisions of the CVPIA. The amount of money available in the restoration fund varies from year to year based on the amount of water sold by the CVP. Since 1994, annual water acquisition expenditures have ranged from $1.6 million to $12 million per year.

Water needs may vary from year to year depending on hydrologic conditions, with less water needed in wet years. Recent upward trends in market price of water have strongly affected the "spot market" for water acquisitions. Water allocations to the CVP and SWP contractors also affect the availability and price of water that can be acquired for the WAP.

Program Restrictions or Limitations

CVPIA–acquired water must not create an involuntary reallocation of CVP yield.

Timeframe for Implementation

USBR has completed short-term acquisitions to supplement instream flows and for refuge water since passage of the CVPIA. Currently, USBR and USFWS are developing a long-term implementation plan for both the instream and refuge elements of the WAP. The models

discussed above and the important information they provide will give decision-makers a basis for identifying and prioritizing water acquisitions. These models and their assumptions are in preliminary form and will be refined based on input by biologists, hydrologists, economists, and policymakers. Final development of the WAP is expected to take 2–3 years (U.S. Fish and Wildlife Service and U.S. Bureau of Reclamation 2000). In the interim, USBR will continue to acquire water, for both the instream and refuge program elements, while developing the long-term acquisition plan.

Coordination with the Environmental Water Program

It is anticipated that the EWP and WAP instream program will be coordinated to the extent practicable as both programs seek to augment instream flows of Central Valley rivers and streams to benefit anadromous fish. Although the EWP will have a broader focus than the WAP, the CALFED agencies and Interior anticipate coordination of the two programs in program planning; identifying willing sellers; decision-making associated with the pursuit, funding, purchase, and management of environmental water; operations; and preparing environmental documentation for proposed acquisitions.

Goals of the WAP are stated in the CVPIA and CVPIA ROD, AFRP, and the 1989 refuge water supply report. Before detailed coordination between the WAP program and EWP can begin, USBR, USFWS, and other CALFED agencies must consider how individual program goals would be addressed in the pursuit of joint acquisitions. As an example, The CVPIA states that CVPIA–acquired water must not create an involuntary reallocation of CVP yield. Any EWP water acquisitions that are acquired in partnership with the WAP, then, could not result in an involuntary reallocation of CVP yield. EWP Briefing Paper 6, *CALFED Commitments and Baseline Conditions Relevant to the EWP*, outlines baseline policy considerations that must be considered during joint water acquisitions.

OTHER PROGRAMS REQUIRING COORDINATION

The following briefly describes other programs/groups with which the EWP should coordinate during framework development and implementation, including:

- CALFED Water Transfer Program,
- CALFED Watershed Program,
- CALFED Environmental Justice Work Group,
- CALFED Ecosystem Restoration Program,
- CALFED Science Program and Independent Science Board,

- CALFED Water Use Efficiency Program,
- CALFED Integrated Storage Investigation,
- CALFED Operations Group and Water Operations Management Team,
- Critical Water Shortage Contingency Plan,
- State and Federal Short-Term Dry-Year Programs ,and
- The Sacramento Valley Agreement Integrated Water Management Plan associated with the Phase 8 Settlement Agreement.

CALFED Water Transfer Program

The CALFED Water Transfer Program (WTP) is one of the eight core CALFED programs. A description of the program is provided in the Water Transfer Program Plan (CALFED Bay-Delta Program 2000c). According to the program plan, the purpose of the WTP is "to provide a framework of actions, policies, and processes to facilitate, encourage, and streamline a properly regulated and protective water market which will allow water to move between users, including environmental uses, on a voluntary and compensated basis." Information developed through the WTP could be used statewide.

Through the WTP, CALFED intends to:

- facilitate water transfers in a manner consistent with existing law;
- resolve institutional, regulatory, and assurance concerns;
- address physical constraints, particularly those associated with cross-Delta transfers;
- encourage transfers that result in overall improvements in CALFED objectives for water supply reliability, ecosystem health, and water quality;
- avoid interfering with the water rights of other legal users of water, avoid or adequately mitigate adverse impacts, and publicly disseminate information;
- promote and encourage uniform rules for transfers using State and federal facilities; and
- promote and encourage the development of standardized rules for groundwater replacement and other conjunctive use–type transfers to avoid degrading groundwater basins or impairing the correlative rights of overlying users, so that historical groundwater levels are sustained or improved.

The WTP is a mechanism for enabling sellers and buyers to transfer water efficiently while protecting water rights and area-of-origin priorities, and providing safeguards against adverse environmental and economic effects. The program does not intend to enter the business of brokering transfers or banking water. Generally, the WTP relies on the existing legal and regulatory framework and does not recommend any major changes in the California water rights system. Both public agencies and private parties within the CALFED project area may use the WTP framework to transfer water. CALFED agencies may purchase water through or for various water transfer programs, including the EWP, EWA, or WAP, and may use the WTP framework in these processes.

The WTP will provide a mechanism to serve two major water management functions:

- to obtain a temporary source of water for users when other sources of water are constrained, and

- to augment existing sources of water to meet existing or projected unmet demands.

Both functions involve moving water made available through a variety of methods, including but not limited to reducing consumptive use, conserving losses, fallowing land, and reoperating reservoirs.

During development of the WTP, the CALFED agencies identified three categories of issues that must be considered during program development:

- environmental, socioeconomic, and water resources protections;
- technical, operational, and administrative roles; and
- wheeling in and access to State and federal facilities.

Solution options were recommended for each category of issues. Collectively, the solution options constitute a plan that provides direction and purpose for developing a more functional water transfer market. A detailed discussion of issue and solution options is provided in the WTP plan.

Funding Availability and Sources

Currently, agencies with jurisdiction over water transfers (DWR, USBR, and SWRCB) use a combination of application fees and public funds to pay for implementation costs. Because the WTP does not propose significant changes to the existing legal and regulatory framework, it will not significantly broaden existing administrative functions. Most of the WTP actions involve changes to policies and procedures; therefore, implementation costs will be absorbed into agency budgets. The principal costs of specific water transfers will be borne by buyers and sellers involved in transactions, not the regulating agencies.

The costs associated with conveying transferred water in a State or federal project facility is currently the subject of several draft bills before the State legislature, which are being

negotiated outside the CALFED process. If the current legislative effort does not resolve the cost issue, then the CALFED agencies may strategize with stakeholders in an effort to develop workable legislation.

Timeframe for Implementation

The WTP is currently in initial stages of execution; the program will be fully implemented over many years. As implementation continues, CALFED agency representatives and stakeholders will continue to refine and propose solutions for unresolved issue areas. Most, if not all, of the solution options recommended in the WTP will be implemented during CALFED Stage 1. This first stage includes actions that, once in place, will continue to function in subsequent stages.

Coordination with the Environmental Water Program

As noted above, it is anticipated that the EWP will use the WTP framework to facilitate environmental water acquisitions. EWP program staff will work with the WTP to help define, evaluate, and pursue acquisitions.

CALFED Watershed Program

The CALFED agencies established the Watershed Program as an aid to achieving the overarching goal of restoring ecological health and improving water quality by working with communities at a watershed level. The Watershed Program, which is detailed in the Watershed Program Plan (CALFED Bay-Delta Program 2000d), is taking a comprehensive, integrated, basin-wide approach to improving conditions in the Bay-Delta system, emphasizing local participation and government cooperation at all levels. Its goals are twofold: to provide financial and technical assistance for local watershed efforts, and to promote collaboration and integration among watershed programs.

The CALFED agencies first described a framework for the Watershed Program in the March 1998 Watershed Management Strategy. The strategy document discussed the CALFED vision for watershed management, the geographic scope and goals for CALFED–funded watershed projects, and the need for coordination with ongoing watershed efforts. Subsequent to the 1998 strategy document, development of the Watershed Program has continued through efforts of the Interagency Watershed Advisory Team (IWAT), stakeholder meetings, the Bay-Delta Advisory Committee, and the Watershed Work Group.

With the release of the CALFED ROD, initial implementation of the Watershed Program was assigned to the CALFED agencies. However, one of the ROD commitments was the development of a memorandum of understanding (MOU) for long-term implementation. Since then, multiple agencies have worked together to develop this MOU, which assigns responsibility

of long-term Watershed Program implementation to the U.S. Environmental Protection Agency (EPA), DWR, State Water Resources Control Board (SWRCB), and other CALFED agencies. This MOU is currently under review by the CALFED Management Group.

Funding Availability and Sources

In February 2001, the Watershed Program released a Proposal Solicitation Package (PSP) in support of the program's goal to provide financial assistance to watershed activities that help achieve the CALFED mission. More than 160 proposals were received totaling nearly $90 million. The Watershed Program announced the final selection of proposals in June 2001.

Funding for Watershed Program PSP efforts could come from a variety of sources, including State and federal appropriations and bond funds.

Coordination with the Environmental Water Program

One of the factors that will be considered in selecting pilot water acquisitions will be whether watershed management activities funded through the Watershed Program are taking place in the watersheds where acquisitions are proposed. The goal of this coordination would be to enhance, where possible, the investment that CALFED agencies make in watersheds with improvements in instream flows. Additionally, the Watershed Program's Watershed Work Group, which includes a diverse range of stakeholders, can also provide outreach for the EWP to local communities.

CALFED Environmental Justice Work Group

In both the EIS/EIR and ROD, the CALFED agencies committed to identifying and mitigating Program activities that might cause disproportionate negative impacts on any populations, including low income, minority, or tribal groups. This commitment is generally referred to as an environmental justice commitment. The CALFED agencies intend to address environmental justice challenges related to management of water in the Bay-Delta system, including examination of the potential effects of the Program's water management actions on communities, and the public health and financial impacts from those actions on minority and disadvantaged populations.

Timeframe for Implementation

CALFED's first step in meeting the ROD commitment will be establishing an Environmental Justice Work Group under the Bay-Delta Public Advisory Committee. The CALFED agencies expect to formally convene this work group in 2001.

Coordination with the Environmental Water Program

Development and implementation of the EWP will require coordination with the Environmental Justice Work Group to ensure that impacts on low income, minority, or tribal groups are adequately addressed and, if necessary, appropriately mitigated.

CALFED Ecosystem Restoration Program

The ERP is one of the eight main CALFED Program elements. The ERP is designed to maintain, improve, and increase aquatic and terrestrial habitats and improve ecological functions in the Bay-Delta to support sustainable populations of diverse and valuable plant and animal species. The ERP is also designed to achieve recovery of at-risk species dependent on the Delta and Suisun Bay, as identified in the CALFED programmatic Multi-Species Conservation Strategy (MSCS), and support the recovery of at-risk species in San Francisco Bay and in the watershed above the estuary. A foundation of the ERP is the restoration of ecological processes associated with streamflow, stream channels, watersheds, and floodplains. The ERP is also an important part of the CALFED WMS.

ERP implementation over the 30-year CALFED Program implementation period will be guided through an ecosystem-based adaptive management approach. ERP goals and objectives for ecosystem, habitat, and species rehabilitation are designed to produce measurable and progressive improvements to the Bay-Delta ecosystem resulting in a level of ecosystem health and species recovery that exceeds existing regulatory requirements. The first 7 years of restoration efforts (Stage 1) are structured to accomplish significant improvement in Bay-Delta ecological health through a large-scale adaptive management approach. The pursuit of ERP goals and objectives will support management decisions in later stages of the implementation. To accomplish these objectives, the CALFED Program has solicited and encouraged the participation of the public, academia, and stakeholders in carrying out restoration actions.

The CALFED agencies will establish, through the ERP and the MSCS, a "Single Blueprint" for restoration and species recovery within the geographic scope of the ERP. The geographic scope of the Single Blueprint includes the Sacramento Valley region, San Joaquin Valley region, Delta region, and Bay region.

Funding Availability and Sources

The ERP uses several processes to fund actions and implement ecosystem restoration activities. One method that has been in use for the last 4 years is to fund projects through a PSP. The PSP process allows for an open solicitation, rigorous technical review, and public input in identifying and funding ecosystem restoration actions.

The PSP process will always be an important aspect of how the CALFED Program funds projects. However, it has become apparent that for all CALFED Programs, a PSP process alone

will not be sufficient. The proposals are unlikely to always include all specific investigations necessary to resolve critical uncertainties, or scientific actions necessary to meet critical or time-dependent objectives. Given the scope and complexity of some of the issues facing the CALFED agencies, it may be necessary to supplement the annual calls for proposals with support for additional and sometimes sustained commitments of effort. Addressing critical information needs may require soliciting specific study approaches or projects that fill gaps of strategic need. In such cases, the CALFED agencies may wish to contract with specific individuals or institutions, because of recognized expertise, accomplishments, and past responsiveness, or to carry out a program of strategic study or action that is not adequately accommodated in the year-to-year PSP process.

Timeframe for Implementation

Implementation of the ERP has been ongoing for several years. To date actions have included annual proposal solicitation processes (competitive grant processes), which have been derived from annual implementation plans, and directed actions, which direct funds to specific projects of high importance. The CALFED agencies are currently working on a Stage 1 implementation plan for the ERP; this plan will focus on years 2 through 7 of CALFED Stage 1. The purpose of the implementation plan is to formulate and present the restoration and information-gathering priorities that guide subsequent solicitation and selection of projects for execution.

Coordination with the Environmental Water Program

The EWP is an element of the ERP and will implement the flow-related goals and objectives contained in the ERPP. One of the factors that will be considered in selecting pilot water acquisitions will be whether habitat restoration activities funded through the ERP are taking place in the watersheds of proposed acquisitions. The goal of this coordination will be to enhance, where possible, the investment that the CALFED agencies make in habitat restoration with improvements in instream flows.

CALFED Science Program and Independent Science Board

The Science Program is integral to all aspects of the CALFED Program. The Science Program was established to provide new information and scientific interpretations necessary to implement, monitor, and evaluate the success of CALFED Program actions and to guide future decision-making. The long-term goal of the Science Program is to progressively build a body of knowledge that will continually improve the effectiveness of restoration actions, allow the CALFED Program to track restoration progress, and allow ever-increasing understanding of the implications of interrelated CALFED Program actions. That body of knowledge must be unbiased, relevant, authoritative, integrated across the common CALFED programs, and communicated to the scientific community, CALFED agency managers, stakeholders, and the

public. Five interconnected applications of science must progress together: adaptive management, monitoring, interdisciplinary knowledge of critical unknowns, improving the scientific basis of water management, and broad communication of science knowledge and scientific activities.

The CALFED agencies intend for the Science Program to build on the work of other State and federal monitoring and research programs. Information generated through the Science Program will likewise be available for use by other State, federal, local, and nongovernmental programs in the CALFED solution area.

In 1997, the CALFED agencies convened a panel of scientific experts—the Scientific Review Panel—to review the ERPP and make recommendations to bolster its scientific underpinning. One of the Panel's suggestions included forming a standing science body composed of independent scientists to assist the CALFED agencies in developing and implementing the ERPP. Following this suggestion, the CALFED agencies established an Interim Science Board as a prototype of a standing science body to assist the ERP in developing and implementing the ERPP. The Interim Science Board acted on a temporary basis while the agencies developed a structure of governance. When the ROD was issued and an interim governance structure defined, the CALFED agencies replaced the Interim Science Board with a permanent ERP Independent Science Board (ISB).

The goals of the ISB are similar to those of the interim board: to assist the ERP by providing scientific advice and guidance with a management orientation. More specifically, the ISB assists CALFED agency staff with:

- Establishing a solid scientific and technical foundation for the ERPP;
- Providing scientific review, advice, and guidance;
- Helping ingrain ecosystem-based adaptive management during implementation of the ERPP;
- Discussing scientific and technical questions at the root of policy issues and priorities.

Timeframe for Implementation

Thus far, implementation of the Science Program has largely been through development and implementation of the ERP. ERP activities such as conceptual model–building, developing indicators of success, and independent science review are critical components of any science program; the CALFED agencies are expanding on these activities and including them in its Science Program, which it will use for all areas of the CALFED Program and related activities.

Coordination with the Environmental Water Program

One of the purposes of the EWP pilot water acquisitions is to gain scientific information about the benefits of increasing instream flows on fish and aquatic ecosystems. The EWP is working with the CALFED Science Program and the ISB to define the scientific aspects of EWP implementation including selecting pilot projects to address important information gaps; defining hypotheses; and designing monitoring and data analysis protocols. Consistent with its intended function, the Science Program will retain a long-term partnership with the EWP.

CALFED Water Use Efficiency Program

The CALFED Water Use Efficiency (WUE) Program, one of the eight principal program elements, is an important part of CALFED's WMS. The CALFED agencies developed and are implementing the WUE Program to ensure that existing water supplies and any new water supplies developed by the CALFED Program are used efficiently and in a manner that results in multiple benefits. The program focuses on improvements in local water use management and efficiency in the urban, agricultural, and managed wetlands use sectors. Through the WUE Program, the CALFED agencies are dedicated to accelerating the implementation of cost-effective actions to conserve and recycle water throughout the state.

The WUE Program defines efficient water use as the "implementation of local water management actions that increase the achievement of CALFED goals and objectives." The water use efficiency approach integrates State regulatory requirements and the practical need for local implementation through a combination of technical assistance, incentives, and directed studies for four WUE Program elements: agricultural water use efficiency, urban water conservation, urban water recycling, and effective use of managed wetlands water. The four elements are detailed in the WUE Program plan, a technical appendix to the programmatic EIS/EIR (CALFED Bay-Delta Program 2000e).

Like most of the other CALFED programs, The WUE Program is in initial stages of program refinement and implementation.

Funding Availability and Sources

A key WUE Program strategy, as articulated in the CALFED ROD, is to implement an incentive-based program that provides grants for actions that contribute to CALFED objectives but are not locally cost effective. In January 2001, the WUE Grant Team, consisting of staff from DWR, USBR, the Natural Resources Conservation Service (NRCS), and other CALFED agencies, launched a PSP to identify and award grants to the most promising agricultural and urban water conservation actions. Future WUE Grant Team funding decisions and PSP–related discussions will be conducted with the Water Use Efficiency Public Advisory Committee (PAC), which will be formed once the Bay-Delta PAC is convened.

Timeframe for Implementation

In December 1998, the CALFED agencies convened an Independent Review Panel on Agricultural Water Conservation to address concerns raised Program by stakeholders about the WUE. The intent of the panel was to help inform future discussions on the subject of water use efficiency.

On June 15, 2001, the agencies held a scoping meeting for the Independent Review Panel on Appropriate Measurement. The 6-hour meeting was held to review and refine the questions that will frame the Panel's full deliberations later this year. The scoping meeting was followed by a teleconference with panelists, also in June, to finalize their recommendations. The Independent Review Panel's deliberations are focused exclusively on agricultural water use; the process is modeled after the Agricultural Water Conservation Potential Panel convened in December 1998.

The results of the Independent Review Panel on Appropriate Measurement's deliberations will be combined with comparable urban language, developed through a separate process, to prepare a comprehensive, draft definition of appropriate measurement that will be disseminated to and discussed with CALFED agencies, policymakers, and interested members of the public. The CALFED agencies will then work with the Legislature and the Governor to develop legislation related to appropriate water use measurement. The WUE Program recognizes that the Legislature and Governor retain sole responsibility for the enactment of statewide legislation.

Coordination with the Environmental Water Program

One of the goals of the WUE Program is to reduce diversions of water from high-priority stream segments to increase instream flows in support of the ERP. The EWP will work closely with the WUE Program to identify opportunities to work together to reduce diversions in EWP high priority streams. This partnership is consistent with the CALFED vision for the EWP, which includes a focus on recognizing potential benefits to agricultural, rural, and urban water users as well as environmental benefits.

Integrated Storage Investigation

The CALFED Program includes a strategy to improve water supply reliability while recognizing the variability of water supply and demand in California. The objective of the CALFED WMS is to reduce the mismatch between Bay-Delta water supplies and current and projected beneficial uses dependent on the Bay-Delta system.

The WMS includes several tools that the CALFED agencies can use to achieve WMS objectives. These tools include several CALFED programs already discussed, including the EWA, WTP, Watershed Program, Science Program, and WUE Program. The toolbox also

includes the Integrated Storage Investigation (ISI), which is focused on evaluating the appropriate role of water storage in the WMS.

Existing storage investigations by individual CALFED agencies and CALFED Program–initiated storage evaluations will be coordinated through the ISI. The ISI will evaluate the relationship between various types of storage and the utility of storage as part of the WMS. The ISI also will analyze the proper mix of groundwater and surface storage facilities, evaluate reoperation of certain hydroelectric power reservoirs, and provide a comprehensive assessment and prioritization of critical fish migration barriers for modification or removal.

Coordination with the Environmental Water Program

The CALFED ROD stipulates that a portion of any new water developed through new surface or groundwater storage facilities funded by the CALFED agencies must be dedicated to environmental uses. Such environmental uses could include instream flow enhancements achieved through the EWP; accordingly, new storage projects could generate water for the EWP. While this water may not be available in streams where increased flows are desired, it could be sold and the money used to acquire water on priority streams or exchanged for water in high priority streams. The EWP will work with the ISI to ensure that EWP needs are considered for any new storage projects.

CALFED Operations Group and Water Operations Management Team

During development of the CALFED Program, operators of the SWP and CVP recognized that compliance with endangered species protections, water quality standards, and provisions of the CVPIA requires extensive coordination between project operations. To help ensure this coordination, representatives of the CVP and SWP and other CALFED agencies meet regularly to discuss and manage day-to-day project operations. The deliberations of this Operations Group or "Ops Group" are conducted in consultation with water user, environmental, and fishery representatives.

The Ops Group meets monthly. The group makes decisions by consensus of designated representatives, or designated alternates, of the CALFED agencies. Decisions can involve change in export rates, barrier operations, or reservoir releases that do not conflict with other operational constraints such as flood control operations, water quality parameters, or permit constraints and that are intended to have no net water supply costs. Participation of NMFS, USFWS, and DFG in the Ops Group does not limit or constrain their authority and responsibility regarding federal or State ESAs.

The Ops Group is responsible for coordinating SWP and CVP operations with the requirements of the SWRCB's Decision 95-6, the biological opinions for the Delta smelt and

winter-run chinook salmon, and the CVPIA. The Ops Group oversees three areas of project operations:

1. the adjustment of export limits to minimize endangered species take or to improve fishery conditions in general,

2. operation of the Delta Cross Channel, and

3. changes in the point of diversion to improve fishery conditions or make up losses to water supply caused by previous operational changes to improve fishery conditions.

Operations (or water management) issues that cannot be resolved by the Ops Group are forwarded to the Water Operations Management Team (WOMT) for resolution. The WOMT comprises high-level agency representatives, including the directors of DWR and DFG and the regional directors of USBR, USFWS, NMFS, and USEPA. The WOMT meets as necessary to resolve CVP and SWP operation conflicts among competing resource demands. As the WOMT resolves issues, it explicitly considers water supply, water quality, and fishery impacts, as well as energy resource impacts in its decisions. It also informs the public, stakeholders, and legislature of issue decisions and the bases for decisions through the Ops Group.

Coordination with the Environmental Water Program

It is possible that EWP water acquisitions may result in the need to coordinate with project operators. This could include allowing acquired water to be Delta outflow, selling EWP water to the EWA and allowing it to be pumped, or "backing up" water into storage in a project reservoir. Such coordination is appropriately handled through the Ops Group and, if necessary, the WOMT.

Critical Water Shortage Contingency Plan

The CALFED ROD recommended that the Governor to convene a panel to develop a contingency plan for reducing impacts of critical water shortages over the next several years. The State's water suppliers bear an increased risk of critical shortages until such a time when water supply reliability measures planned in the ROD are implemented. In December 2000, the Governor's Advisory Drought Planning Panel (Panel) issued a formal Critical Water Shortage Contingency Plan (CWSCP). In general, the purpose of the CWSCP is to identify available resources and funding mechanisms to reduce the impacts of critical water shortages to primarily agricultural and urban water users during initial implementation (Stage 1) of the CALFED Program.

In developing the plan, the Panel met four times between late August and December 2000. The CWSCP focuses on recommendations for a statewide program that can be initiated quickly in the event of a significant and prolonged critical water shortage. These

recommendations are intended to address actions not explicitly contained in the ROD or to accelerate implementation of actions not scheduled for execution in the early years of CALFED implementation. The recommendations are also intended to apply statewide, not just in the CALFED solution area. The Panel's recommendations were built upon the experience gained from the State Drought Water Banks of 1991, 1992, and 1994 and other water acquisition and transfer programs.

The CWSCP provides background information on the water supply conditions in the State, the predictability of hydraulic drought conditions, and the impacts of recent droughts in 1976–77 and 1987–1992; provides a summary of the many operational, institutional, environmental, and legislative changes that have occurred in water management since the 1987–1992 drought; and identifies several challenges to implementing the CWSCP. The focus of the plan, however, is the list of recommendations to the Governor.

In the CWSCP, the Panel recommends the following:

- Implementation of a Critical Water Shortage Reduction Marketing Program (CWSRMP)
- Assistance to Small Water Systems and Homeowners in Rural Counties
- Assistance for Local Agency Groundwater Programs
- Assistance for Local Agency Integrated Water Management Plans
- Drought-Related Research and Public Outreach Activities
- Accelerated Financial Assistance to Local Agencies

The key recommendation is development and implementation of the CWSRMP. The CWSRMP would operate on an as-needed basis to purchase and allocate water whenever parts of the State were suffering critical water shortages. DWR would acquire options to purchase water from willing sellers and would exercise the options as needed to make water available for sale to water users experiencing critical water shortages. A critical water shortage would not be limited to times of hydrologic drought, but would be any time an area in the State is experiencing a shortage. The program would not be a tool of first resort for water users experiencing shortages, but a tool to be used after water users had already made substantial efforts on their own behalf.

Because the CWSRMP is not limited to periods of hydrologic drought, the Panel has suggested that the CWSRMP be a tiered program. Tier 1 of the CWSRMP would consist largely of water shortage preparedness activities, including preparation of a programmatic environmental impact report (PEIR). Tier 1 encompasses the water supply reliability and water use efficiency provisions of the CALFED ROD and essentially would be implemented throughout Stage 1 of the CALFED program. State agencies would facilitate actions that would improve local agencies' abilities to respond to water shortages.

During Tier 2, in the early stages of a hydrologic drought or other critical water shortage, options for water would be purchased and water allocations would be made. Local agencies declaring critical water shortages and demonstrating that they are maximizing use of their own resources would be eligible to buy water from the program. Buyers of the water would pay a price for the water that would cover the cost for implementing the program and costs of mitigating purchase-specific third party and environmental impacts identified through the CEQA process.

Tier 3 of the CWSRMP would be implemented during the later stages of a hydrologic drought or during a water shortage emergency. The trigger for implementing Tier 3 would be a declaration of emergency by a water agency pursuant to Water Code Section 350, by a city or county, or by the Governor. Provisions in Tier 3 would include the continued implementation of Tier 2 measures, plus extraordinary measures needed to protect public health and safety.

DWR would have primary control over the water purchased through the CWSRMP, although local entities, in partnership with DWR, would also control the use of the water.

Funding Availability and Sources

DWR is currently funded to begin preparation of the PEIR.

As currently defined, local entities would fund the purchase of water under Tier 2 of the CWSRMP. The money would cover not only the cost of the water, but also the costs for mitigating third-party and environmental impacts associated with water acquisitions.

Program Restrictions or Limitations

As described above, DWR expects to implement the CWSRMP in three tiers. Entities desiring to purchase water under Tier 2 of the CWSRMP must demonstrate they are maximizing use of local resources and are implementing drought-preparedness activities. Use of Tier 3 actions would require a declaration of emergency by a water agency pursuant to California Water Code Section 350, by a city or county, or by the Governor.

Timeframe for Implementation

The Panel submitted the CWSCP to Governor Davis on December 31, 2000, in accordance with the CALFED ROD. Since that time, DWR has successfully accelerated Proposition 13 financial assistance to local agencies, which was one of the Panel's recommendations. Other recommendations have not yet been implemented, but DWR expects to begin development of the CWSRMP and preparation of a PEIR on the program in 2001. DWR expects to begin assistance for local agency groundwater programs, the collection of new groundwater hydrologic data, assistance with local agency integrated water management plans, and technical assistance to small water systems and homeowners in rural counties.

Coordination with the Environmental Water Program

Because the CWSCP would acquire water, it could compete for water with the EWP. On the other hand, it may be possible that the EWP could act as a buyer of water during critical water shortage conditions to protect the resources in very high priority stream reaches. Another possibility is that the EWP could contribute funds to influence the timing of third-party transfers so that they occur at ecologically beneficial times.

State and Federal Short-Term Dry-Year Programs

Over the past 10 years, DWR has initiated a number of dry-year (or drought) water acquisition programs. These short-term programs have all been designed for fast implementation in response to SWP contractor needs during dry or critically dry periods. DWR operated drought programs in 1991, 1993, and 1994, and a dry-year program in 2001. Lessons learned during implementation of each program were considered during development of subsequent programs. Additionally, DWR considered the lessons learned during the drought programs during development of its recommended CWSCP, which is described above. USBR has also operated short-term dry-year programs in response to CVP contractor needs. For both agencies, dry-year or drought programs are developed as the need arises.

Once the CWSCP is fully developed and implemented, DWR should not experience a need to initiate additional short-term dry-year programs. However, in the interim, DWR may initiate subsequent dry-year or drought programs if conditions require such programs. USBR may do the same until the CALFED Program forms its larger drought strategy, scheduled for development over the next several years.

Funding Availability and Sources

Funding will vary by program and by agency. Because these types of programs are not typically planned for, they are likely to be financed through general or emergency funds.

Timeframe for Implementation

It is assumed that each program will serve as a temporary means to address dry-year or drought conditions in the absence of longer-term State, federal, or CALFED Program drought plans. Typically, these short-term programs are planned and implemented in a single water year.

Coordination with the Environmental Water Program

Because short-term dry-year programs would acquire water, they could compete with the EWP. On the other hand, it may be possible that the EWP could act as a buyer of water during

critical water shortage conditions to protect the resources in very high priority stream reaches. Another possibility is that the EWP could contribute funds to influence the timing of third-party transfers so that they occur at ecologically beneficial times.

Sacramento Valley Agreement Integrated Water Management Program

The SWRCB has been engaged in proceedings to determine the responsibility to meet water quality standards in the Sacramento–San Joaquin Delta. The SWRCB has completed phases 1 through 7 of this proceeding (Decision 1641), and has recently been focused upon Phase 8, which involves the Sacramento River and its tributaries. During Phase 8 proceedings, DWR and the USBR, as operators of the State and federal export projects, respectively, have claimed that certain water right holders in the Sacramento Valley must cease diversions or release water from storage to help meet water quality standards in the Delta. Sacramento Valley water users have claimed that their water use has not contributed to any water quality problems in the Delta, and, as senior water right holders and water users within the watershed and counties of origin, they are not responsible for meeting these standards.

Rather than continue with what had become highly adversarial proceedings, Sacramento Valley water users, DWR, USBR, and export water users agreed to defer these Phase 8 proceedings and instead continue using a cooperative approach. This approach focuses on meeting water supply, water quality, and other environmental needs in areas of origin and throughout California. The result of this cooperative effort was an agreement titled *Agreement Regarding Resolution of Phase 8 Issues, Development and Management of Water Supplies, and a Binding Commitment to Proceed Pursuant to Specified Terms*; this agreement is commonly known as the Sacramento Valley Agreement.

In the agreement, Sacramento Valley water users, DWR, USBR, and export water users agreed that:

- The State and federal export projects will continue to be responsible for the flows necessary to meet the water quality standards in the Delta during the term of the agreement;

- DWR, USBR, and water users fully commit to study Sites Reservoir and to improve other water supplies in the Sacramento Valley as part of an integrated water management and water supply development program for the Sacramento Valley;

- The parties will join together to secure public funding for water management and supply projects in the Sacramento Valley; the focus will be on optimizing the use of existing water supplies and enabling local interests to develop additional water supplies in areas of origin; and

- During the next 6 months, the parties will prepare a short-term joint work plan to implement the agreement; work plans on longer-term projects will follow.

The agreement will be implemented in an integrated water management program. The goals of this program are to meet 100% of existing and future water demands in the Sacramento Valley, to foster local partnerships, and to develop and optimize water for use in the Delta. The program will include integration of supplies through use of surface water storage facilities, direct diversion, groundwater management, and development of the Sites Reservoir; flood protection; watershed management; water use efficiency; and fish passage improvements.

Timeframe for Implementation

The short-term joint work plan, which will address water management strategies for the 2002–2003 water year, will be completed by October 2001. If at that time the parties do not agree to the short-term plan, the Phase 8 proceedings would resume. If the parties do agree, they will move forward cooperatively and develop medium- and long-range water management plans.

Coordination with the Environmental Water Program

The Integrated Water Management Program could result in new water being developed in the Sacramento Valley. If any new water results from facilities paid for in part using CALFED funds, some of that water could become available to the EWP. While this water may not be on streams where increased flows are desired, it could be sold and the money used to acquire water on EWP priority streams or exchanged for water on high priority streams. Any new water developed using non–CALFED funds could increase the amount of water available for acquisition from willing sellers. Therefore, the EWP will work with the parties preparing the Integrated Water Management Program to ensure that EWP needs are considered during planning for and construction of any new storage projects.

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